Unit 10: Introducing length and height

Comparing lengths and heights

➜ pages 87–89

1. Children should have ticked the following:
a) Left-hand tree
b) Stretch limo

2. a) shorter, longer
b) longer, shorter

3. There are many different possible answers.

4. a) taller
b) shorter
c) taller or longer

5. There are many different possible ways to draw answers.

Reflect

Children could have explained how they would compare who is taller in different ways, e.g.

I can compare who is taller by getting people to stand back to back so I could see who is taller.

I can compare who is taller by asking people to stand against a wall and make a mark at the top of their head then see whose mark is higher up the wall.

Some children might suggest using a measuring instruments such as a tape measure.

Non-standard units of measure (1)

➜ pages 90–92

1. a) 6
b) 7
c) 4, 6

2. a) 5 (though children's estimates will vary)
b) 7 (though children's estimates will vary)

3. Children should have:
a) extended the spring so that it is 8 cubes long.
b) drawn something on top of the bear, e.g. a hat, so that it makes the picture 5 cubes tall altogether.

4. Children should have drawn:
a) a person who is 3 cubes tall. Children are likely to have added 2 cubes to the picture to make a tower of 3.
b) a worm that is 5 cubes long. Children are likely to have added 4 cubes to the picture to make a horizontal line of 5.

5. 14

Reflect

Children will explain how they measure an object with cubes in different ways, e.g.

I stood the object on the ground and put a tower of cubes next to it. I counted how many cubes it took to reach the top of the object.

I made a long line of cubes that started and ended at the same level as the object and then counted how many cubes were in it.

Non-standard units of measure (2)

➜ pages 93–95

1. a) 22
b) 5

2. a) 15
b) 5

3. a) 2, 3 (although children's estimates may vary)
b) Children could have given different answers as long as they were able to explain their reasoning, e.g.
The footstep. I think this because you can be more accurate at measuring different distances using shorter units.
The tape. I think this because you can cut other pieces of tape the same length and easily put them end to end, which makes it easy to measure distances on any surface.

4. a) 4, 2 (though children's estimates may vary)
b) 2, 1 (though children's estimates may vary)
c) The baseball bat is longest.

Reflect

Children will have chosen different tools to measure their friend's height, e.g.

I chose my hand because it was easy to use. My friend is 12 hand-spans tall.

I chose a book because it was quite long. My friend is 7 books tall.

Measuring length using a ruler

➜ pages 96–98

1. a) 11
b) 8
c) 15

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2. Children should have completed the drawing of the pencil so that it ended at the measurement:
   a) 8 cm
   b) 14 cm
3. Children should have matched drawings to lengths as follows:
   giraffe ➜ 7 cm, monkey ➜ 3 cm, elephant ➜ 5 cm
4. 6, 4
5. Children should have known how to use a ruler correctly to draw a house that is 8 cm long and 4 cm tall.

Reflect

Children could have explained how they used a ruler in different ways but they should ideally mention how they positioned the ruler next to the strip of paper so that one edge of the paper lined up with the 0 mark on the ruler, e.g.

I put the strip next to the ruler so that the start of the strip lined up with the 0 on the ruler. I looked along the ruler to see where the end of the strip was.

I put the ruler alongside the strip of paper so that the 0 on the ruler was at the start of the paper. I looked at the measurement where the paper ended to find its length.

Solving word problems – length

➜ pages 99–100

1. a) 6
   b) 12
2. 6 cm + 6 cm = 12 cm
3. Children could have explained their reasoning in different ways, e.g.

   Nat is wrong because the string is not straight.

   Nat is wrong. You need to pull the string straight alongside the ruler to measure it.
4. Different answers are possible, e.g.

Length of	Length of	Total length
1 cm	9 cm	10 cm
2 cm	8 cm	10 cm
3 cm	7 cm	10 cm

5. 0 cm

Reflect

Children could have explained different methods to compare the lengths of the pencils, e.g.

I can see that the pencil on the left is shorter than the bottom pencil.

The pencil on the left reaches from 0 cm to 5 cm on the ruler so it is 5 cm long. The pencil on the right reaches from 3 cm to 9 cm on the ruler so it is 6 cm long. This means that the pencil on the left is shorter than the one on the right.

End of unit check

➜ pages 101–102

My journal

Children should have explained their choice with reference to the fact that one of the strings is not taut, e.g.

I chose the plain string because it is not stretched out and it ends at the same place as the spotted string. If I stretched it out like the bottom string it would be longer.

Power play

Check the children's measurements and counting.

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